

Title - METHOD FOR PRODUCING POLYAMIDE PREPOLYMER AND POLYAMIDE, AND POLYAMIDE OBTAINED FROM THE PRODUCTION METHOD

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PROBLEM TO BE SOLVED: To provide a method for producing a polyamide resin comprising caprolactam as the main raw material, which enables the omit or time shortage of a hot water extraction process and lowers an unreacted caprolactam content and an oligomer content.

SOLUTION: The polyamide prepolymer having an amino group content of (greater than)0.1 mmol/g and a cyclic oligomer content of (less than)0.6 wt.% is prepared by thermally treating an aqueous caprolactam solution having a water content of 2 to 20 wt.% at 250 to 330(degree sign)C for 1 to 30 min under pressurization. For example, the prepared polyamide prepolymer is fed into an atmospheric pressure polymerization device and then polymerized under a temperature condition that the highest value of the polymerization temperature is less than or equal to 10(degree sign)C + the melting point of the obtained polyamide, thus obtaining the polyamide having an unreacted caprolactam content of (less than)15 wt.% and an oligomer content of (less than)1.8 wt.%.

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